SPEC® CINT2006 Result

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Bull SAS

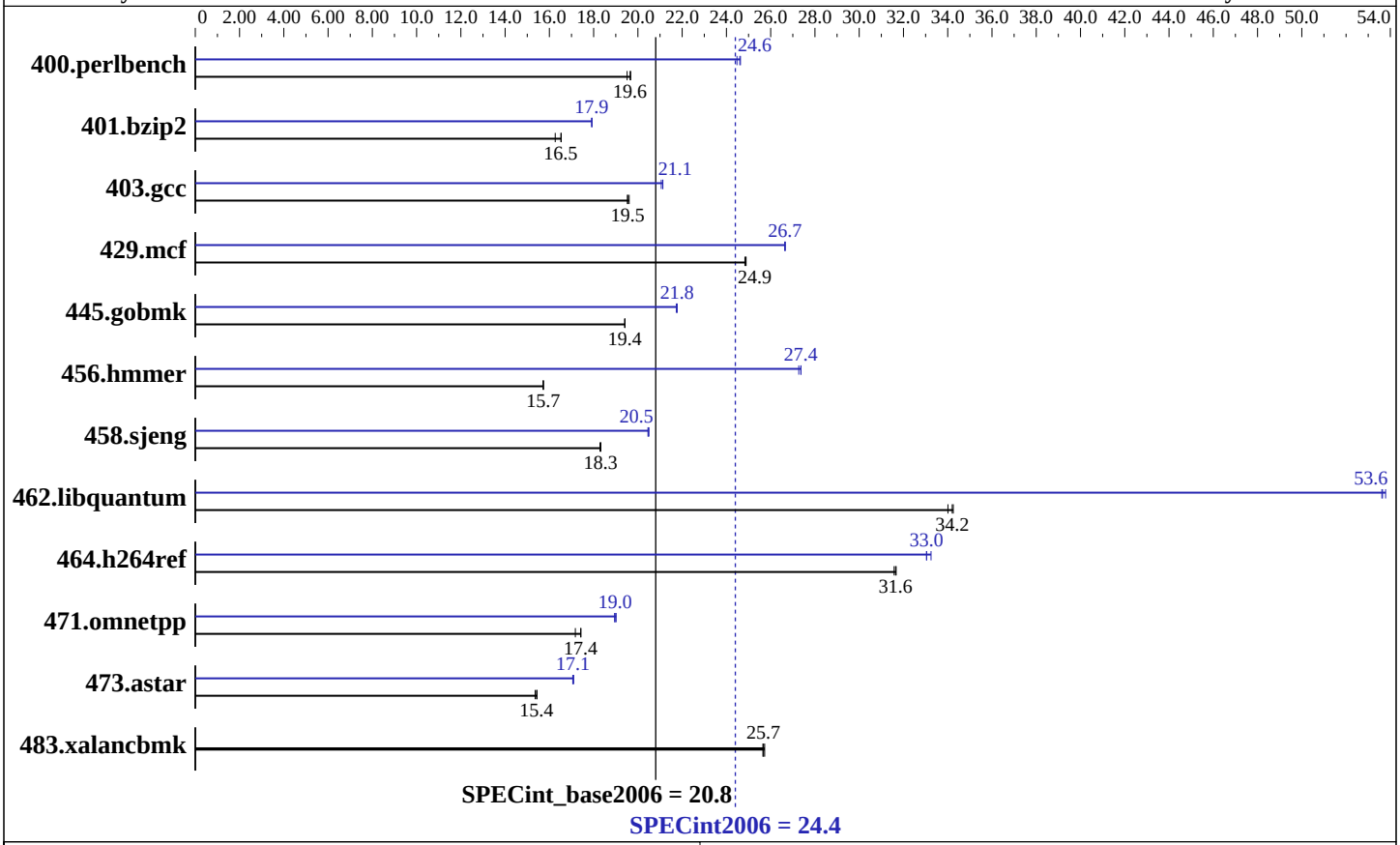
NovaScale B240
(Intel Xeon E3113, 3.00 GHz)

SPECint®2006 = 24.4

SPECint_base2006 = 20.8

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Oct-2008
Hardware Availability: Jun-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon E3113
CPU Characteristics:	1333 MHz system bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (4x2 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem:	1x73 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 10 (x86_64) SP1 Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Binutils 2.17.50.0.15 SmartHeap library V8.1

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	501	19.5	**497**	**19.6**	497	19.7	397	24.6	**397**	**24.6**	399	24.5
401.bzip2	**584**	**16.5**	584	16.5	593	16.3	539	17.9	**539**	**17.9**	538	17.9
403.gcc	412	19.5	**412**	**19.5**	411	19.6	382	21.1	381	21.1	**381**	**21.1**
429.mcf	367	24.8	**367**	**24.9**	366	24.9	**342**	**26.7**	342	26.7	342	26.6
445.gobmk	541	19.4	540	19.4	**540**	**19.4**	482	21.8	**482**	**21.8**	483	21.7
456.hmmer	593	15.7	**593**	**15.7**	593	15.7	341	27.4	**341**	**27.4**	342	27.3
458.sjeng	660	18.3	**661**	**18.3**	662	18.3	590	20.5	591	20.5	**591**	**20.5**
462.libquantum	609	34.0	**606**	**34.2**	605	34.3	**386**	**53.6**	385	53.8	386	53.6
464.h264ref	701	31.6	**699**	**31.6**	699	31.7	666	33.2	670	33.0	**670**	**33.0**
471.omnetpp	364	17.2	359	17.4	**359**	**17.4**	**329**	**19.0**	330	18.9	329	19.0
473.astar	**455**	**15.4**	455	15.4	457	15.4	411	17.1	**411**	**17.1**	412	17.1
483.xalancbmk	**269**	**25.7**	268	25.7	269	25.6	**269**	**25.7**	268	25.7	269	25.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to null
```

Platform Notes

```
BIOS Settings:
Hardware Prefetcher = Enabled
Adjacent Cache Line Prefetch = Enabled
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

Continued on next page

Base Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast -vec-guard-write -parallel -par-runtime-control

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/cpu2006/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -ansi-alias -prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

403.gcc: `-fast -inline-calloc -opt-malloc-options=3`

429.mcf: `-fast -prefetch`

445.gobmk: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O2 -ipo -no-prec-div -ansi-alias`

456.hmmer: `-fast -unroll2 -ansi-alias -opt-multi-version-aggressive -auto-ilp32`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4`

462.libquantum: `-fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always -vec-guard-write -opt-malloc-options=3 -parallel -par-runtime-control`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/spec/cpu2006/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/spec/cpu2006/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel101_int_flags.xml

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